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NOTICE OF ALLOWANCE AND FEE(S) DUE

27879

7590

03/02/2010

INDIANAPOLIS OFFICE 27879 BRINKS HOFER GILSON & LIONE CAPITAL CENTER, SUITE 1100 201 NORTH ILLINOIS STREET INDIANAPOLIS, IN 46204-4220 EXAMINER

MCCAIG, BRIAN A

ART UNIT PAPER NUMBER

1797

DATE MAILED: 03/02/2010

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/549,768 | 09/11/2006 | Ivan Greager | 10690/013 | 1298 |

TITLE OF INVENTION: PRODUCTION OF LINEAR ALKYL BENZENE

| APPLN. TYPE | SMALL ENTITY | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|----------------|--------------|---------------|---------------------|----------------------|------------------|------------|
| nonprovisional | NO | \$1510 | \$300 | \$0 | \$1810 | 06/02/2010 |

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

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B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

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II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE

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| appropriate. All further indicated unless correct maintenance fee notifica | correspondence including delayed or directed of tions. | ng the Patent, advance onerwise in Block 1, by (| rders and notification of a) specifying a new corr | maintenance fees verspondence address | will be ; and/o | mailed to the current or (b) indicating a separ | correspondence address as ate "FEE ADDRESS" for |
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| CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address) 27879 7590 03/02/2010 INDIANAPOLIS OFFICE 27879 BRINKS HOFER GILSON & LIONE CAPITAL CENTER, SUITE 1100 | | | | Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission. | | | |
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| 201 NORTH ILLINOIS STREET INDIANAPOLIS, IN 46204-4220 | | | | (Depositor's name) | | | |
| I (DI/II (/II OEI | 5, 11 40204 4220 | | | | | | (Signature) |
| | | | | | | | (Date) |
| APPLICATION NO. | FILING DATE | | FIRST NAMED INVENTO | R | ATTC | RNEY DOCKET NO. | CONFIRMATION NO. |
| 10/549,768 | 09/11/2006 | • | Ivan Greager | | • | 10690/013 | 1298 |
| TITLE OF INVENTION | I: PRODUCTION OF LI | NEAR ALKYL BENZEI | NE | | | | |
| APPLN. TYPE | SMALL ENTITY | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSU | E FEE | TOTAL FEE(S) DUE | DATE DUE |
| nonprovisional | NO | \$1510 | \$300 | \$0 | | \$1810 | 06/02/2010 |
| EXAM | IINER | ART UNIT | CLASS-SUBCLASS | | | | |
| MCCAIG, | BRIAN A | 1797 | 585-448000 | | | | |
| Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON | | | or agents OR, alternal (2) the name of a sing registered attorney or 2 registered patent att listed, no name will b | ne of a single firm (having as a member a attorney or agent) and the names of up to d patent attorneys or agents. If no name is ame will be printed. | | | |
| PLEASE NOTE: Un recordation as set fort (A) NAME OF ASSI | less an assignee is ident h in 37 CFR 3.11. Comp GNEE | ified below, no assignee pletion of this form is NO | data will appear on the T a substitute for filing ar | patent. If an assign n assignment. Y and STATE OR (| COUNT | TRY) | cument has been filed for |
| Please check the appropr | riate assignee category or | categories (will not be pa | rinted on the patent): | Individual C | orporat | on or other private grou | ip entity 🖵 Government |
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| 5. Change in Entity Sta | tus (from status indicate as SMALL ENTITY statu | * | ☐ b. Applicant is no lo | nger claiming SMA | LL EN | ГІТҮ status. See 37 CF | R 1.27(g)(2). |
| NOTE: The Issue Fee an interest as shown by the | d Publication Fee (if req records of the United Sta | uired) will not be accepte ttes Patent and Trademark | ed from anyone other than c Office. | the applicant; a reg | istered | attorney or agent; or the | assignee or other party in |
| Authorized Signature | | | | Date | | | |
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| This collection of inform an application. Confiden submitting the complete this form and/or suggest Box 1450, Alexandria, V Alexandria, Virginia 223 | tiality is governed by 35 d application form to the ions for reducing this bu. Virginia 22313-1450. DC | CFR 1.311. The informatic U.S.C. 122 and 37 CFR USPTO. Time will vary rden, should be sent to the ONOT SEND FEES OR | on is required to obtain or 1.14. This collection is e 7 depending upon the ind the Chief Information Offi COMPLETED FORMS | retain a benefit by stimated to take 12 ividual case. Any c cer, U.S. Patent and FO THIS ADDRES | the pub minute: ommen Trader S. SEN | lic which is to file (and is to complete, including is on the amount of tim nark Office, U.S. Depar D TO: Commissioner fo | by the USPTO to process) g gathering, preparing, and le you require to complete tment of Commerce, P.O. or Patents, P.O. Box 1450, |

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| INDIANAPOLIS | S OFFICE 27879 | MCCAIG, BRIAN A | | |
| | GILSON & LIONE | ART UNIT | PAPER NUMBER | |
| CAPITAL CENTE | ER, SUITE 1100 | | 1797 | |
| 201 NORTH ILLI | NOIS STREET | DATE MAILED: 03/02/2010 | | |
| INDIANAPOLIS, | IN 46204-4220 | | | |

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 358 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 358 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 (571)-272-4200.

| | Application No. | Applicant(s) | |
|--|--|--|----------|
| | Application No. | Applicant(s) | |
| Notice of Allowability | 10/549,768 | GREAGER ET AL. | |
| Notice of Allowability | Examiner | Art Unit | |
| | BRIAN MCCAIG | 1797 | |
| The MAILING DATE of this communication appe All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RI of the Office or upon petition by the applicant. See 37 CFR 1.313 | (OR REMAINS) CLOSED or other appropriate com GHTS. This application i |) in this application. If not included munication will be mailed in due course | |
| 1. X This communication is responsive to <u>December 9, 2009</u> . | | | |
| 2. X The allowed claim(s) is/are 46-72, renumbered as 1-4, 9, 5 | <u>-8, 10-18, 21-22, 19-20, a</u> | and 23-27, respectively. | |
| 3. Acknowledgment is made of a claim for foreign priority un a) All b) Some* c) None of the: 1. Certified copies of the priority documents have | | d) or (f). | |
| 2. Certified copies of the priority documents have | been received in Applica | tion No | |
| 3. Copies of the certified copies of the priority doc | cuments have been recei | ved in this national stage application fro | om the |
| International Bureau (PCT Rule 17.2(a)). | | | |
| * Certified copies not received: | | | |
| Applicant has THREE MONTHS FROM THE "MAILING DATE" on noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. | | ile a reply complying with the requirem | ents |
| 4. A SUBSTITUTE OATH OR DECLARATION must be subminion INFORMAL PATENT APPLICATION (PTO-152) which give | | | ∃ OF |
| 5. CORRECTED DRAWINGS (as "replacement sheets") mus | t be submitted. | | |
| (a) I including changes required by the Notice of Draftspers | on's Patent Drawing Rev | ew (PTO-948) attached | |
| 1) ☐ hereto or 2) ☐ to Paper No./Mail Date | | | |
| (b) ☐ including changes required by the attached Examiner's Paper No./Mail Date | Amendment / Comment | or in the Office action of | |
| Identifying indicia such as the application number (see 37 CFR 1. each sheet. Replacement sheet(s) should be labeled as such in the | | | of |
| DEPOSIT OF and/or INFORMATION about the deposit attached Examiner's comment regarding REQUIREMENT I | | | ie |
| | | | |
| Attachment(s) | 5 □ Notice of | Informal Datant Application | |
| Notice of References Cited (PTO-892) D Notice of Draftperson's Patent Drawing Review (PTO-948) | | Informal Patent Application Summary (PTO-413), | |
| 3. ☐ Information Disclosure Statements (PTO/SB/08), | Paper N | o./Mail Date 's Amendment/Comment | |
| Paper No./Mail Date | _ | | |
| Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. ⊠ Examine 9. □ Other | 's Statement of Reasons for Allowance | ; |
| /DOREDT I WILL ID! | BAM | · | |
| /ROBERT J. HILL, JR/ Primary Examiner, Art Unit 1797 | 2/18/2010 | | |
| , | 2,10,2010 | | |
| | i | | |

Application/Control Number: 10/549,768 Page 2

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DETAILED ACTION

1. This Office action is based on the remarks filed December 9, 2009, for the 10/549768 application.

Response to Arguments

2. Applicant's arguments, see pages 9 and 10, filed December 9, 2009, with respect to claim 46 have been fully considered and are persuasive. The rejection of claim 46 has been withdrawn.

Allowable Subject Matter

- 3. Claims 46-72 are allowed.
- 4. The following is an examiner's statement of reasons for allowance: The prior art of record does not appear to anticipate or render obvious the limitations of independent claim 46. The prior Office action asserted that the claimed invention was unpatentable over O'Rear et al (WO 01/64610). In the prior Office action, it was stated that while O'Rear et al teaches dehydrogenation of the paraffins in the feedstock prior to the alkylation reaction instead of after the alkylation reaction in a recycle stream as recited in the instant application, the selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results. See In re Burhans, 154 F.2d 690, 69 USPQ 330 (CCPA 1946) and MPEP 2144.04. However, the teaching of O'Rear et al increases the concentration of olefins in the feed to the alkylation reactor, which forms alkylated benzene compounds. That is, the F-T condensate feed to the dehydrogenation reactor of O'Rear et al [reference element 40] already contains olefins in a concentration similar to that of the instant application since the Fischer-Tropsch (F-T) processes for both are similar (see prior Office action for additional details of the similarity between F-T processes). However, the dehydrogenation reactor of O'Rear et al dehydrogenates the paraffins in the condensate to form a product with a greater concentration of olefins in the feed to the alkylation reactor, which subsequently increases the conversion to alkyl benzene compounds in the reactor. By locating the dehydrogenation reactor downstream of the alkylation reactor in the instant application, the feed to the alkylation reactor has a lower concentration of olefins than the

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condensate alone, which would seem to lower the conversion to alkyl benzene compounds. Thus, the process of the

instant application would not have been obvious.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue

fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be

clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed

to BRIAN MCCAIG whose telephone number is (571) 270-5548. The examiner can normally be reached on M-F 8-

430.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn

Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or

proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information

Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or

Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more

information about the PAIR system, see http://pair-direct.uspto.gov. Should you have guestions on access to the

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assistance from a USPTO Customer Service Representative or access to the automated information system, call

800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BAM 2/18/2010 /ROBERT J. HILL, JR/ Primary Examiner, Art Unit 1797